

BETTER PLANT MANAGEMENT INCREASES PRODUCTION, SUPPORTS GROWTH

ABOUT MIRACLE TOOLS AMERICA, LLC. Miracle Tools manufactures industrial drill bits used in the aerospace, automobile, implement, and other industries. Located in Davenport, Iowa, the company has approximately 75 employees and sells directly to M.A. Ford and Mitsubishi to handle the transportation, logistics, and outside sales.

THE CHALLENGE. Due to a combination of increased global demand for its products and the desire by many U.S.-based manufacturers to use U.S. products, Miracle Tools needed to increase production at its industrial drill bits facility in Davenport. The company reached out to the Iowa Center for Industrial Research and Service (CIRAS), part of the MEP National Network™, for assistance.

MEP CENTER'S ROLE. CIRAS worked with Miracle Tools to identify bottlenecks in the production facility, and recommended applying Theory of Constraints (TOC) and Lean concepts to increase throughput. After identifying the company's forming process as a constraint, CIRAS provided education on basic TOC concepts and used the forming process as a test case to help the company apply TOC and Lean tools. Miracle Tools then applied these tools to its regrind process, reducing the average delivery time by one week.

The company made additional improvements to the plant's work schedule and preventative maintenance program. Next, CIRAS connected Miracle tools with students from Iowa State University who assisted the company in laying out its new shop floor, utilizing virtual manufacturing processes and plant layouts to help the company design a more efficient flow. Miracle Tools invested in new plant equipment to increase production and boost sales. The improvements yielded cost-savings and helped the company add and retain jobs.

"A combination of increased demand as the world economy continued to recover, as well as the desire by many U.S.-based manufacturers to use U.S. products, drove the need for us to expand and become more efficient. CIRAS helped us do both."

-Ryan DeBarr, President

RESULTS



\$500,000 in new sales,
\$300,000 in retained sales



Invested **\$1,200,000** in plant
equipment



\$130,000 in cost-savings



Added **6** jobs and retained 10
jobs



\$700,000 saved on
investments

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